

TRAINING FOR MAKING AROMATHERAPY CANDLES TO MINIMIZE USED COOKING OIL WASTE IN THE COMMUNITY OF TAPEN HARGOMULYO KULON PROGO VILLAGE

Khairunnisa Etika Sari ^{1*}, Annisa Rahmawati ¹, Nurul Fauziah Agustin ¹, Lingga Kamal Atha ¹, Radhian Azizi ¹, Aspasia Danis Wara ¹, Arina Khoirunnisa ¹, Muhammad Rizki Listiawan ¹, Rafif Ma'ruf¹, Fibrian Dwi Cahyanto ¹

¹ UIN Sunan Kalijaga Yogyakarta
*khairunnisa.sari@uin-suka.ac.id

Abstract - *One example of liquid waste is used cooking oil. In addition to being bad for human health, used cooking oil can also pollute the environment, such as decreasing the quality of water and soil, and causing clogging of drains if disposed of just like that. This community service activity using training and mentoring methods aims to provide knowledge about the impact of used cooking oil waste and the economic potential of used cooking oil waste, provide entrepreneurial insights related to the production of aromatherapy candles, as well as provide training in making aromatherapy candles using the basic ingredients of used cooking oil. This service was carried out in Tapen Hamlet, Hargomulyo, Kulon Progo. The target of this socialization and training activity is housewives. The activity, which was carried out on August 11, 2023, ran smoothly and received a positive response and high enthusiasm from the participants. The hope of this dedication is that the community of Tapen Hamlet, Hargomulyo, Kulon Progo is increasingly concerned with the environment by not throwing away the wastes of cooking oil as well as being able to create a creative economy of households by utilizing the used cooking oil.*

Keywords: *Cooking Oil Waste, Aromatherapy Candle*

1. INTRODUCTION

Indonesian people generally like fried food, so consumption of cooking oil is quite high. The intensity of the use of cooking oil can be seen from the variety of processed foods served in daily life, ranging from snacks to side dishes. The high consumption of cooking oil can make the use of cooking oil done repeatedly. In fact, cooking oil can only be used with certain restrictions. Cooking oil can be used up to 3-4 times for frying (Kapitan, 2018). If cooking oil is used repeatedly, the fatty acids in it will become increasingly saturated and change color. Used cooking oil is said to have been damaged or can be called used cooking oil and is not good for consumption (Sundoro *et al.*, 2020). Repeated use will have an impact on health and based on research results as a trigger for cancer and heart disease (Phelia *et al.*, 2021). Apart from that, used cooking oil waste can potentially pollute soil and water if it is not managed properly. Used cooking oil can be a source of environmental pollution in waterways, rivers or reservoirs. Water pollution caused by used cooking oil can damage ecosystems in reservoirs or other water sources. In addition, used cooking oil that flows into water sources or reservoirs can cover the surface layer of the water, preventing sunlight from penetrating into the water and damaging the environment for aquatic biota (Azahar *et al.*, 2016). Some residents of Tapen Hamlet, Hargomulyo still don't know the impact of using used cooking oil, so many residents just throw it into the drainage canals. Basically, oil that is thrown into the drain can freeze in the waste pipe, causing the waste pipe to become clogged.

The community in Tapen Hamlet, Hargomulyo is a cooperative community and has a willingness to learn new, useful things, as well as participate in skills training that empowers the community's economy. Based on these conditions, one strategy for increasing human resources is through education and training, where in this activity a training is carried out on the use of used cooking oil waste for society amidst globalization. Proper use of science and technology will create new innovations (Hasibuan *et al.*, 2021). The community must understand and be able to adjust the use of waste according to environmental conditions oriented to various aspects, both social and economic. Therefore, the priority problems that partners mutually agreed to address through this service activity are aspects of producing aromatherapy candles from used cooking oil waste and aspects of entrepreneurial insight. Aromatherapy candles are candles that are made in such a way by using ingredients that are easily available such as used cooking oil and aromatherapy as additional candles with the aim of obtaining candles that are long lasting and have an aroma that can act as a relaxation.

The partner priority issues to be resolved are: (a) Limited knowledge of the community regarding the economic potential of used cooking oil waste, (b) Lack of community skills regarding the utilization of waste cooking oil (used cooking oil) to be processed into aromatherapy candles, (c) Limited knowledge of the community regarding the impact of used cooking oil on water and soil pollution, (d) Limited knowledge of community entrepreneurship related to the utilization of used

cooking oil waste into products of high economic value (aromatherapy candles). Therefore, this community service activity is focused on: 1) providing knowledge to the community regarding the economic potential of used cooking oil waste, 2) skills training for the community regarding processing used cooking oil waste into aromatherapy candles, 3) public knowledge regarding the impact of used cooking oil on pollution water and land, 4) providing entrepreneurial insight regarding the production of aromatherapy candles.

2. METHOD

This community service activity is carried out using training methods and assistance to the community, especially Housewives (IRT) in Tapen, Hargomulyo Village, Kulon Progo. Training and mentoring is carried out directly in the field in two stages (Astuti *et al.*, 2021). The first stage focuses on socializing the impact/dangers of used cooking oil on health and the environment as well as the economic potential that will result if used cooking oil is managed properly. Meanwhile, the second stage focuses on training and assistance in making aromatherapy candles from used cooking oil. Participants in this training and mentoring were 15-18 housewives (IRT) from representatives of each RT in Tapen Hamlet, Hargomulyo Village, Kulon Progo. Each stage of the training and mentoring is preceded by prior preparation and then closed with an evaluation of the implementation in the form of discussion and questions and answers.

A. Tools and materials

Training on processing used cooking oil requires several tools and ingredients to make candles. The tools used for training on processing used cooking oil are: pans, stirrers, spoons, shot glasses, stoves and gas. Meanwhile, the materials needed are charcoal, used cooking oil, stearin, essential oils, used crayons, scissors, toothpick, and cotton thread.

B. Work procedures

The steps for making aromatherapy candles from used cooking oil are as follows:

1. Prepare tools and materials.
2. Put used cooking oil \pm 300 milliliters (60 tablespoons) into the pan.
3. Heat cooking oil in a pan until hot (try not to boil).
4. Add \pm 150 grams or 15 tablespoons of stearin.
5. Stir until the stearin dissolves.
6. Add 1 knuckle of colored crayon/pastel (adjust the color of the used cooking oil, the darker the used cooking oil, the more crayons you add) and add essential oil/eucalyptus oil.
7. Stir again until the colors are mixed evenly and boil.
8. Put the oil and the mixture into a shot glass that has been given a hemp rope.
9. Wait until it hardens.

The practice of training and assistance in processing used cooking oil into aromatherapy candles is carried out at the residence of the head of Tapen Hamlet. This training was carried out by involving community service students and partners (trainees). Where students help to provide socialization materials and training as well as practice for processing used cooking oil into recycled products in the form of aromatherapy candles.

3. RESULT AND DISCUSSION

Starting from the limited knowledge of the residents of Tapen Hamlet, Hargomulyo about the impact of the disposal of used cooking oil, as well as limited knowledge and skills in utilizing used cooking oil waste, the service group took the initiative to assist the community in utilizing used cooking oil waste into economically valuable products, namely aromatherapy candles. Socialization and training activities on the utilization of used cooking oil waste into aromatherapy candles were held on August 11, 2023 at the residence of the head of Tapen Hamlet, running smoothly with high enthusiasm from the participants. The tools and materials needed had been prepared before the activity began so that the training activities went well. Socialization and training activities were accompanied directly by students implementing community service and mothers representing each RT as participants.

The socialization activities began with the presentation of material about used cooking oil, the impact of used cooking oil waste disposal on the environment, and the processing of used cooking oil waste, which means processing here is recycling used cooking oil waste into new products. The presentation of the material is expected to increase the knowledge of the Tapen Hamlet community about the impact of the disposal of used cooking oil waste on the environment. According to Fransisca (Adhani & Fatmawati, 2019) aquatic ecosystems can be polluted due to the disposal of used cooking oil waste, this is because used cooking oil waste discharged into waters can increase Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) levels due to the covering of the water surface with a layer of oil so that sunlight cannot enter the waters, as a result aquatic biota experience death which will ultimately disrupt the aquatic ecosystem.

Then the activity continued with training in making aromatherapy candles made from used cooking oil. The processing of used cooking oil is not only useful for increasing community awareness of the environment but also useful in creating a creative household economy. After the practice of making aromatherapy candles, the next activity was an explanation of the opportunities and benefits of the aromatherapy candle craft economically. Apart from being therapeutic candles, aromatherapy candles can also be used as souvenirs or gifts. With creativity in mixing colors and aromas and beautified with attractive packaging, aromatherapy candles can have high economic value. This series of community service activities aims to increase the knowledge and skills of the people of Tapen Hamlet, Hargomulyo regarding the impact of used cooking oil pollution on the environment, as well as its utilization into high-economic value products. The results of this service activity are in line with the program carried out by (Kenarni, 2022) in Pener Village, Pemalang Regency, (Inayati & Dhanti, 2021) in Kebanggan Village, and (Aisyah, 2020) in Kujang Sari Village, Bandung.

4. CONCLUSION

Based on the activities that have been carried out by the community service implementing group for the residents, especially the housewives of Tapen Hamlet, Hargomulyo, Kulon Progo, it can be concluded that by holding training on skills in making aromatherapy candles from used cooking oil which is environmentally friendly, it has received a positive response from local residents. The enthusiasm of the participants was very high in participating in these activities, as evidenced by the several questions raised during the training. This triggers local residents to be more concerned about liquid and solid waste management and to be able to develop an entrepreneurial spirit in processed products that are environmentally friendly at household scale. Thus, it is expected to be able to increase the economic value in the environment. The next hope is that community service activities related to the use of domestic waste (used cooking oil) can be sustainable in the future and develop knowledge related to controlling household-scale domestic waste management.

REFERENCE

- Adhani, A., & Fatmawati, F. (2019). Training of Aromatherapy And Decorative Candles Making to Minimize Used Cooking Oil For Amal Coastal Village Communities. *Jurnal Pengabdian Masyarakat Borneo*, 3, 31–40.
- Astuti, A. Y., Linarti, U., & Indah Budiarti, G. (2021). Pengolahan Limbah Minyak Jelantah Menjadi Lilin Aromaterapi Di Bank Sampah Lintas Winongo, Kelurahan Bumijo, Kecamatan Jetis, Kota Yogyakarta. *SPEKTA (Jurnal Pengabdian Kepada Masyarakat: Teknologi Dan Aplikasi)*, 2(1), 73. <https://doi.org/10.12928/spekta.v2i1.3701>
- Azhar, W. N. A. W., Bujang, M., Jaya, R. P., Hainin, M. R., Mohamed, A., Ngadi, N., & Jayanti, D. S. (2016). The potential of waste cooking oil as bio-asphalt for alternative binder—An overview. *Jurnal Teknologi*, 78(4), 111–116. <https://doi.org/10.11113/jt.v78.8007>
- Ferawati Artauli Hasibuan, Henry Dinus Hutabarat, N. H. (2021). Pelatihan Pemanfaatan Sains dan Teknologi dalam Meningkatkan Sumber Daya Manusia Masyarakat Desa Sibio-Bio. *Jurnal Pengabdian kepada Masyarakat Radisi*, 1(2), 41–49.
- Inayati, N. I., & Dhanti, K. R. (2021). Pemanfaatan Minyak Jelantah Sebagai Bahan Dasar Pembuatan Lilin Aromaterapi Sebagai Alternatif Tambahan Penghasilan Pada Anggota Aisyiyah Desa Kebanggan Kec Sumbang. *Budimas Jurnal Pengabdian Masyarakat*, 3(1), 160–166. <https://doi.org/10.29040/budimas.v3i1.2217>
- Kapitan, O. (2018). Analisis Kandungan Asam Lemak Trans dalam Minyak bekas. *Jurnal Kimia Terapan*, 1(1), 17–31. https://www.researchgate.net/profile/Origenes-Kapitan/publication/322909487_ANALISIS_KANDUNGAN_ASAM_LEMAK_TRANS_TRANS_FAT_DALAM_MINYAK_BEKAS_PENGGORENGAN_JAJANAN_DI_PI

NGGIR_JALAN_KOTA_KUPANG/links/5a75451fa6fdccb3c05975d/ANALISIS-KANDUNGAN-ASAM-LEMAK-TRA

- Naina Rizki Kenarni. (2022). Pemanfaatan Minyak Jelantah dalam Pembuatan Lilin Aromaterapi. *Jurnal Bina Desa*, 4(3), 343–349.
- Phelia, A., Pramita, G., Bertarina, Ashruri, & Misdalena, F. (2021). Pemanfaatan Limbah Minyak Jelantah Menjadi Sabun Sebagai Upaya Pengendalian Limbah Domestik Masa Pandemi Covid-19. *Jurnal Pengabdian Kepada Masyarakat Radisi*, 1(3), 181–187.
<https://www.jurnal.radisi.or.id/index.php/PKMRADISI/article/view/76>
- Siti Aisyah, L. (2020). Pelatihan Pembuatan Lilin Aromaterapi Dalam Pemanfaatan Limbah Minyak Jelantah. *Jurnal Abdimas Kartika Wijayakusuma*, 1(2), 98–103.
<https://doi.org/10.26874/jakw.v1i2.69>
- Sundoro, T., Kusuma, E., & Auwalani, F. (2020). Pemanfaatan Minyak Jelantah Dalam Pembuatan Lilin Warna-Warni. *Jurnal Pengabdian Masyarakat Ipteks*, 6(2), 127–136.